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ABSTRACT

This study compared the scores of 60 students enrolled in Introduction to Psychology at Phoenix College (Arizona) to national norms on the Study Skills Inventory. The study also analyzed gender differences and compared ethnic groups and age groups. Results indicated that the Phoenix College sample closely reflected the national norm. No clear pattern of differences in study skill scores emerged for gender or ethnicity, while older students scored higher than younger students as well as higher than the national norm. It was concluded that the national norm could be used as a standard against which scores of Phoenix College students could be compared. (20 references) (JDD)

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A DESCRIPTION OF THE STUDY SKILLS OF STUDENTS ENROLLED IN INTRODUCTION TO PSYCHOLOGY AT PHOENIX COLLEGE

Societal Factors Affecting Education

by

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A Practicum Report presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

January, 1991

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A DESCRIPTION OF THE STUDY SKILLS OF STUDENTS ENROLLED IN INTRODUCTION TO PSYCHOLOGY AT PHOENIX COLLEGE

by

Marian Gibney

January, 1991

The purpose of this study was to describe the study skills of students enrolled in Introduction to Psychology (PSY101) at Phoenix College (PC). While study skills workshops and seminars were offered at PC, there had never been an attempt to accurately describe the study skills of students. The four research questions addressed were: How do students enrolled in PSY101, at Phoenix College, compare to the national norms on a standardized test of study skills? How do study skill scores of males and females in this sample compare? How do study skill scores of students in this sample from selected ethnic groups compare? How do study skill scores of students in this sample from selected age groups compare?

The Study Skills Inventory (SSI), a standardized test of study skills (ACT, n.d) was administered to sixty students enrolled in three day sections of PSY101. The distribution of scores for the PC sample was described by computing means, standard deviations and percentiles for the

five subscales and the total score and comparing them to the national norm provided by ACT (n.d). through the use of tables and graphs.

The PC sample closely reflected the national norm, and for gender and ethnicity, no clearcut pattern of differences in study skill scores emerged for the different demographic categories. With respect to age older students in the PC sample tended to score higher than younger students at PC as well as scoring higher than the national norm.

It was concluded that the national norm could be used as a standard against which scores of PC students could be compared. It was further concluded that study skill scores of PC students could not be categorized by gender or ethnicity, and while older students tended to score higher, the scores still closely reflected the scores reported for the national norm.

A recommendation to disseminate the results to the members of the Psychology department and the staff of the PC Learning center was made. Other recommendations were: that a study be conducted in which the scores of the PC sample are tested for significant differences from the national norm; that a study be conducted to ascertain the relationship between grades and study skills; and that an investigation of other study skills inventories be undertaken because of the difficulties involved with scoring large numbers of SSI's.

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Chapter 1

INTRODUCTION

Background and Significance

Student success is a major interest of the Maricopa Community College District (MCCD). The Psychology department at Phoenix College has reported that many students are at very high risk for failing or dropping out of classes. An estimated 49 percent of Introduction to Psychology (PSY101) students were receiving grades of D or F at midterm during the Fall 1988 semester (Dalby, 1988). Members of the Psychology department are concerned with discovering causes for, and intervention strategies related to, this high risk for failure. A study conducted by Gibney (1990) indicated that the students' initial basic skills in Reading and English, as measured by the ASSET (American College Testing Program, 1986) placement tests were inadequate indicators of potential success in PSY101. Students who appear to be adequately prepared for PSY101, in terms of basic Reading and English skills, are still at risk for failure.

In a study of faculty perceptions of basic skills, Jacobs (1981) reports that students' study skills are considered to be extremely important to success in college. In addition, it was reported that faculty members considered their students' study skills to be inadequate. Furthermore,

it has been suggested that training in study skills can lead to enhanced academic success (Dodd, 1987). Kuhn (1988) reports that an assessment of the study habits of students enrolled in basic science classes indicated that students had difficulty with time management and keeping up to date with assignments. The Learning Center at Phoenix College offers workshops for students designed to enhance time management, test-taking skills, test anxiety reduction, and textbook reading. At this time, a student might attend these workshops based on personal or instructor perception of need, but this informal process does not address the needs of the majority of students.

The problem was that there had been no systematic examination of the study skills of students enrolled in PSY101. The purpose of this investigation was to describe the study skills of students enrolled in PSY101. In addition, study skills were described by gender, age and ethnic representation.

The seminar entitled Societal Factors Affecting Education addresses the impact of many external factors on education. Varcoe (1986:2) asserts that these external factors may play a large role not only in student success, but educational policy:

> Awareness of the interdependence and influence of societal factors affecting education should be of utmost importance to educators, administrators, and various others associated with the educational enterprise. The impact and consequences of a myriad of societal factors affecting the nature and style of

education are directly and indirectly related to policy/decision making in education.

In order to address the needs of students and to ensure their success, faculty members and administrators must understand the needs of the students. In addition, they must ascertain whether the conditions are the same for all students. Certain demographic factors may influence the performance of particular groups of students and these factors must be identified and addressed. Immediate concerns for success of individual students can be dealt with through a better understanding of the school related skills they possess. In addition, long range plans for policy changes can be impacted by an accurate assessment of these skills.

Research Questions

Four research questions were addressed in the completion of this study. The first research question was: "How do students enrolled in PSY101, at Phoenix College, compare to the national norms on a standardized test of study skills?" The second question to be addressed was: "How do study skill scores, as measured by a standardized test of study skills, of males and females, enrolled in PSY101 at Phoenix College compare?" The third question was: "How do study skill scores of students enrolled in PSY101 at Phoenix College, as measured by a standardized test of study skills, from selected ethnic groups compare?"

The final research question to be addressed was: "How do study skill scores of students enrolled in PSY101 at Phoenix College, as measured by a standardized test of study skills, of selected age groups compare?"

Chapter 2

REVIEW OF LITERATURE

The enrollment at many community colleges reflects an increasing proportion of students at high risk for failure. These non-traditional students represent a wide range of backgrounds. Minority students, students from poverty backgrounds, students from non-traditional family structures, students who have not graduated from high school, students who are older than traditional college age, and displaced homemakers are some of the non-traditional students who are filling the classes of community colleges across the nation (Fuchs, 1983). In addition, the enrollment of increasing proportions of non-traditional students into community college programs has led to serious criticisms of those same programs

> . . . for enrolling disproportionate numbers of minorities, for recruiting students with poor academic skills, for poor retention of students, for failure to provide upper-division transfers to four-year institutions, for preserving the social class structure, and a host of other charges related to their present remedial role of taking on the "youth problem" (Cross, 1985:44).

Certainly, many of these students come unprepared to complete classes at the college level, but deficiency in academic skills does not totally explain the lack of success for many of these students. As pointed out above, Gibney (1990) found that in PSY101, scores on English and Reading

placement tests were not accurate predictors of success in PSY101.

A literature search conducted by Nova University's Information Retrieval Services and a subsequent ERIC search revealed few recent studies related to study skills. Most of the articles were published more than five years ago and the majority of these articles described intervention strategies related to study skills rather than analyses of students' study skills.

This study was designed to assess and describe the current study skills of students enrolled in PSY101 at Phoenix College. In any assessment, it is necessary to use a measurement instrument that is valid and reliable. According to the Guide to Administering and Interpreting the Study Skills Inventory (College Edition) (ACT, n.d.), the American College Testing Study Skills Inventory was designed to serve three purposes. First, it can used as a screening device to identify students whose study behaviors are less adequate than others in their group. Second, it can be used to identify areas in which whole groups of students appear to have difficulty. Finally, by examining the scores of the five subscales, it can serve as a motivational tool to encourage students to change behaviors that may be hindering their success.

The Guide to Administering and Interpreting the Study Skills Inventory (College Edition) (ACT, n.d.) reports that

the normative sample included 940 students from three four-year colleges and five two-year colleges. Studies of the measurements of criterion-related variability showed that

> . . . higher SSI scores are associated with higher grades, students with higher educational aspirations score higher than do students with lower aspirations, and students who had some type of study skills instruction in high school scored higher than students who did not (ACT, n.d.:9).

Study skills have been demonstrated to be one of the critical factors with respect to success in college. In a study of students experiencing academic difficulty, as measured by grade point average, Judd (1985) found that one of the factors most closely related to academic difficulty was study habits and attitudes. Hodges (1981), recommends an assessment of students' study skills to enhance a system of testing and placement. Finally, Jacobs (1981) reports that many of the professors at Indiana University considered their students' study habits to be inadequate, thereby contributing to their lack of academic success.

In studies that measure perceptions of study skills, there appears to be a discrepancy between students' ratings of their study skills and professors' ratings of the students' study skills. Students tend to rate themselves higher than they are rated by their professors. Friedlander (1981) reports a significant difference between instructors' ratings of students' independent learning habits and students' ratings of their own habits. In Friedlander's (1983) study, 63 percent of the students reported themselves

capable of independent learning, while only 29 percent of the instructors reported the students able to learn independently. Furthermore, while students tend to rate their study skills as good, they are also inclined to express the need for more study skills classes. Zaritsky and Brewer (1984) found that, while the majority of students in their survey rated themselves as good or excellent in reading and study skills, the students still expressed a desire to take additional courses to improve their reading skills and get help with their assignments.

With the increasing number of non-traditional students entering college, it is important to ascertain whether study skills vary among different demographic categories. Mueller and Gibson (1983) discuss the study behavior of community college students. They report that scores on the Study Behavior Inventory (SBI) increased as the age of the students increased. They also reported that females scored higher on the SBI than males.

Finally, not all studies found that study skills were related to academic success. Dutrow and Houston (1981), in a study of factors related to student success, reported that while grade point average was related to certain personality characteristics, it was not related to reading scores or study skill inventory scores.

Given the discrepancies between instructors' and students' ratings of student study skills and the

inconclusive findings with respect to the relationship between study skills and success in school, it is important to develop an accurate picture of student study skills, using a standardized test of study skills. This description can provide the foundation for decisions related to the nature and type of interventions offered by the college. In addition, not all at-risk students benefit from the same interventions and an accurate description of the study skills of various demographic groups can provide a basis for more accurate diagnosis and identification of factors that impede the individual student's success.

Chapter 3

METHODOLOGY AND PROCEDURES

In order to accurately portray the study skills of students enrolled in PSY101, a descriptive research methodology was employed. For purposes of this study, the population was defined as all students enrolled in PSY101 at Phoenix College. A program evaluation was conducted in the Psychology Department in 1988 (Psychology Department Program Evaluation, 1988). During this evaluation, the demographic characteristics of all students enrolled in Psychology classes was determined. As a result of this evaluation, it was concluded that the student population of the Psychology Department was an accurate reflection of the student population of Phoenix College in general. After a discussion with members of the Psychology department, it was determined that the sample to be tested would be students enrolled in three, day sections of PSY101. This sample was expected to yield approximately seventy subjects. Three entire classes, rather than individual students, were chosen to facilitate data collection and minimize disruption of classes in the Psychology department. Since most day classes are offered in the morning, two morning classes and one early afternoon class were selected.

In order to answer the proposed research questions, the following procedures were adopted:

1. The ACT Study Skills Inventory (SSI), College Edition, was administered to students enrolled in three, day sections of PSY101.

2. Students were be asked to complete a short form indicating their gender, age, and ethnic representation (Appendix A). The categories on this form were discussed and agreed upon by members of the Psychology department at Phoenix College.

3. The SSI was scored according to the directions provided on the inventory.

4. The demographic information and scores from the five subscales and the total score from the SSI were entered into the ABstat (Anderson-Bell, 1989) statistical package for the IBM-PC. All statistical computations were completed using ABstat (Anderson-Bell, 1989).

5. Percentiles for scores on each of the five subscales and the total score on the SSI were computed. These percentiles were compared, in table format, to the national norms presented in the Guide to Administering and Interpreting the Study Skills Inventory (College Edition), (American College Testing (ACT), n.d.).

6. The mean and standard deviation for each of the five subscales and the total score on the SSI were computed and presented in table format.

7. The mean of each of the five subscales and the total score on the SSI for Phoenix College students were

compared in graphic format to the corresponding means for the normative sample.

8. The mean of each of the five subscales and the total score on the SSI for males and females were computed and presented in graphic format.

9. The mean of each of the five subscales and the total score on the SSI for the various ethnic groups were computed and presented in graphic format.

10. The mean of each of the five subscales and the total score on the SSI for the various age groups were computed and presented in graphic format.

Definition of Terms

Terms used in this study were defined as follows:

1. Study skills-- the scores obtained on the five subscales and the total score of the SSI.

2. National norms-- those norms for the five subscales and the total score of the SSI provided in the Guide to Administering and Interpreting the Study Skills Inventory (College Edition) (ACT, n.d.).

3. Learning center-- the office at Phoenix College where students are offered, free of charge, tutoring, study skills workshops and other programs designed to enhance Success in college courses.

Assumptions

In the completion of this study, two assumptions were made. The most important assumption was that students accurately reported their study behaviors on the SSI. ACT (n.d.:1) cautions:

> The accuracy of Study Skills Inventory results depends on the accuracy with which students report their behaviors. Although research indicates that students generally attempt to self-report correctly, there may be a tendency for some individuals to present themselves more favorably. In order to lessen the likelihood of deliberately inaccurate responses, instructors and counselors should emphasize that the inventory is not a test, but a diagnostic instrument designed to identify strengths as well as problem areas.

Instructions to the students were designed to take this caution into consideration. The second assumption was that the students in the classes selected as part of the sample, were representative of PSY101 students in general.

Limitations

This study was limited with respect to the fact that the national norms may not be truly representative of the students at Phoenix College. ACT (n.d.) reports that the norms include students from both two- and four- year colleges. In addition, the norms did include two-year colleges in Arizona. However ACT (n.d.:3) also states "The appropriateness of these norms for a given school will be limited by the degree of similarity between the norming schools and the target school."

Another limitation was that, since the sample size was limited to three classes, the sample may not be truly representative of the population in general. In addition, evening students were not included in this study.

Chapter 4

RESULTS

The SSI was administered to students attending two morning and one early afternoon PSY101 classes. Students were also asked to complete the short demographic information form. All students attending class agreed to participate in the study. This procedure yielded sixty subjects.

In order to address the assumption that the subjects were representative of the student population in general, the gender and ethnic representation of the sample were compared to the demographic characteristics of students reported for Phoenix College for the Fall 1990 semester (Dalby, 1990). It was not possible to directly compare the age groups of the sample with the age groups reported for the Phoenix College student body, since the age categories reported for this study did not correspond to the age categories reported for Phoenix College in general.

With respect to gender, 38 percent of the sample were male and 62 percent of the sample were female. At Phoenix College, for the Fall 1990, 39 percent of the students were male and 58 percent were female and 3 percent did not report gender.

The ethnic distribution of the sample was as follows: 66 percent White; 15 percent Hispanic; 10 percent African-

American; 5 percent Native American; 2 percent Asian/Pacific Islander; and 2 percent (one student) did not report ethnicity. At Phoenix College, for the Fall 1990, the student ethnicity was reported as follows: 75 percent White; 15 percent Hispanic; 5 percent African American; 3 percent Native American; 2 percent Asian/Pacific Islander.

In order to address the first research question: "How do students enrolled in PSY101, at Phoenix College, compare to the national norms on a standardized test of study skills?" percentiles for scores obtained on each of the five subscales and the total score of the SSI were computed. Percentiles corresponding to the scores obtained on the Time Management subscale for the Phoenix College sample and the national norm are presented in Table 1.

Table 1

Comparison of Scores of Phoenix College Students on the Time Management Subscale of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Percentile
66	99	99
64	98	99
62	96	98
58	93	95
56	89	91
55	85	88
54	81	85
53	75	80
51	69	71

Table 1 (Cont.)

50	66	66
49	63	61
48	58	56
47	53	51
46	49	46
45	45	41
44	41	35
42	38	25
41	33	20
40	28	17
39	24	13
38	20	10
36	17	6
35	13	5
34	9	3
33	8	2
32	6	1
31	4	1
28	3	1
24	1	1

For scores above 50, the 66th percentile, on the Time Management subscale, Phoenix College students scored slightly above the national norm. A score of 53 would place a student at the 75th percentile in the Phoenix College normative sample, but at the 80th percentile with respect to the national norm. Below a score of 50, Phoenix College students scored lower than the national sample. A score of 38 would represent the 20th percentile of the Phoenix

College sample, but the 10th percentile of the national norm.

A comparison of scores obtained by Phoenix College students to the national norm on the Text Reading subscale of the SSI is presented in Table 2.

Table 2

Comparison of Scores of Phoenix College Students on the Text Reading Subscale of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Percentile
61	99	99
60	97	99
56	93	95
55	87	94
54	82	92
53	79	90
52	77	87
50	72	82
49	65	79
48	60	75
47	55	71
46	48	66
45	44	61
44	42	55
43	36	49
42	29	43
41	24	36
40	19	32
39	16	26
38	14	23

Table 2 (Cont.)

37	12	17
36	9	12
35	8	10
34	5	7
32	3	4
27	1	1

Scores on this subscale were consistently higher for Phoenix College students, as compared to the national norm. A score of 47 on this scale would place a student in the 55th percentile for the Phoenix College sample and in the 71st percentile for the national norm. Scores for Phoenix College students in the extreme high and low ranges, fell closer to the those of the national norm.

Table 3 contains a comparison of scores of Phoenix College students to the national norm on the Note Taking subscale of the SSI. On this subscale, Phoenix College students scored consistently lower than the national norm. As in the Text Reading subscale, scores at the extreme high and low ranges were closer to the national norms than those in the mid-ranges.

Table 3

Comparison of Scores of Phoenix College Students on the Note Taking Subscale of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Percentile
66	99	99
61	98	95
60	95	93
59	91	90
57	86	84
56	79	79
54	73	73
53	69	68
52	66	62
51	64	57
50	62	52
49	58	47
48	54	43
47	50	37
46	48	32
45	46	27
44	42	24
43	37	20
42	32	16
41	28	13
40	21	10
39	13	8
36	8	4
33	5	2
32	3	1
29	1	1

Table 4 contains a comparison of the scores of Phoenix College students on the Information Resources subscale of the SSI to the national norm. Phoenix College students scored consistently higher than the national norm. As reported for the Text Reading and Note Taking subscales, scores in the extreme high and low ranges are closer to the national norm.

Table 4

Comparison of Scores of Phoenix College Students on the Information Resources Subscale of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Percentile
68	99	99
65	98	99
64	94	98
63	90	97
62	88	96
61	86	94
60	83	91
59	74	87
58	67	83
57	64	79
56	62	75
55	58	72
54	56	68
53	54	62
52	53	56
51	48	51
50	40	47
49	34	42

Table 4 (Cont.)

48	29	38
47	25	34
46	22	29
45	19	26
44	18	22
43	15	19
42	12	15
40	9	11
38	7	6
37	4	5
35	2	3

Presented in Table 5 is a comparison of scores of Phoenix College students to the national norm on the Exam Preparation subscale of the SSI. On this subscale, Phoenix College students scored consistently lower than the national norm, although scores in the extreme high and low range are closer to the national norm than those in the mid-ranges.

Table 5

Comparison of Scores of Phoenix College Students on the Exam Preparation Subscale of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Percentile
67	99	99
63	98	99
61	96	97
57	93	89
56	90	85
54	88	78

Table 5 (Cont.)

53	85	73
52	79	68
51	71	63
50	64	57
49	61	52
48	57	46
47	52	40
46	48	35
45	41	31
44	35	26
43	32	22
42	28	18
41	24	14
40	20	12
39	15	9
37	12	6
34	8	3
31	4	1
30	3	1
26	1	1

Table 6 contains a comparison of scores of Phoenix College students for the total score on the SSI to the national norm.

Table 6

Comparison of Scores of Phoenix College Students for the Total Score of the ACT Study Skills Inventory to the National Norm

Score	Phoenix College Percentile	National Norm
320	99	99
308	98	99
290	95	94
281	93	91
279	90	90
273	88	86
270	86	83
269	83	82
266	79	80
265	78	79
264	75	78
263	73	77
259	71	73
258	69	72
254	67	68
252	63	66
251	61	65
249	59	63
247	56	60
246	53	58
244	51	55
239	49	48
234	47	42
233	46	41
231	44	38
229	43	36

Table 6 (Cont.)

226	41	32
224	38	30
223	36	28
222	33	27
221	31	25
219	28	23
213	25	18
206	23	12
205	21	11
204	19	11
202	18	10
199	15	7
198	13	7
197	11	6
196	9	6
186	7	3
184	4	3
167	3	1
164	1	1

For scores above 266 (80th percentile, nationally), Phoenix College students scored slightly lower than the national norm. For scores between 266 and 244 (between the 80th and 55th percentiles, nationally) Phoenix College students scored slightly higher than the national norm. For scores below 244 (48th percentile nationally), Phoenix College students scored lower than the national norm.

In addition to a comparison of the percentiles of scores obtained by Phoenix College students to those presented for the national norm, the means and standard deviations for the five subscales and the total score for the Phoenix College sample and the national norm were compared. Table 7 presents a summary of the means and standard deviations on the five subscales and total score of the SSI obtained by the Phoenix College sample and those presented for the national norm.

Table 7

Means and Standard Deviations for the Total Score and Five Subscales of the ACT Study Skills Inventory for Phoenix College Students and the National Norm

	Phoenix College		National Norm	
	Mean	S.D.	Mean	S.D.
Time Management	45.8	9.0	47.3	7.0
Text Reading	46.1	7.4	44.1	6.9
Note Taking	47.3	8.5	50.1	7.4
Information Resources	52.3	8.2	50.8	7.8
Exam Preparation	46.4	8.0	49.2	7.0
Total Score	237.8	34.1	241.6	29.6

On the subscales of the SSI, the mean scores obtained by the Phoenix College students were within approximately three points of the mean scores reported in the national norms. For the total score, the Phoenix College mean was

approximately four points lower than the national norm. An examination of the reported standard deviations suggests that the scores obtained in the Phoenix College sample were slightly more variable than those obtained in the national norm.

Figure 1 is a graphic representation of the mean scores obtained by Phoenix College students in comparison to the mean scores reported in the national norms on the five subscales of the SSI.

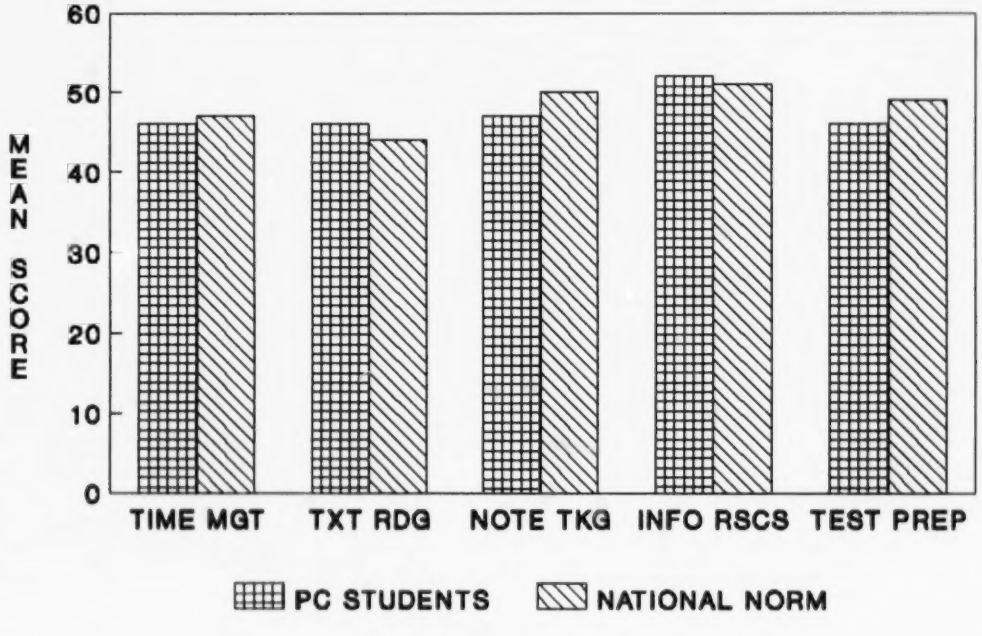

Figure 1

Comparison of Means Obtained by Phoenix College Students on the Five Subscales of the SSI to Those Reported for the National Norm

Data from Figure 1 indicate that students averaged higher than the national norm for the Text Reading, and

Information Resources subscales. They averaged lower than the national norm on the Time Management, Note Taking and Test Preparation subscales.

Figure 2 is a graphic representation of the mean obtained by Phoenix College students for the total score on the SSI compared to the mean reported for the national norm. As can be seen in Figure 2, for the total score of the SSI, Phoenix College students averaged four points below the national norm (238 for PC vs. 242 for national norm).

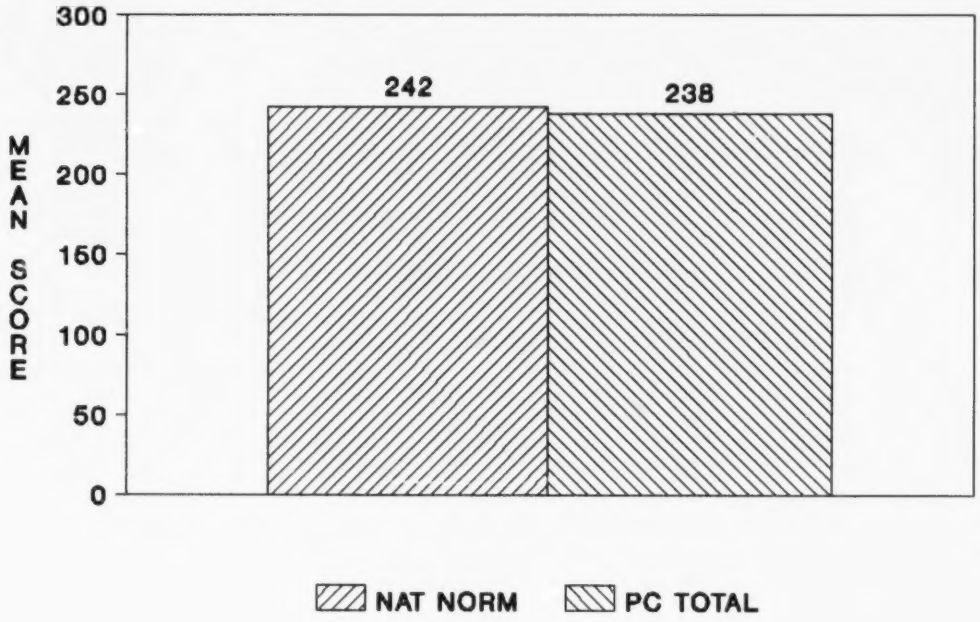

Figure 2

Comparison of Mean Obtained by Phoenix College Students on Total Score of SSI to Mean Reported for the National Norm

The second research question was: "How do study skill scores, as measured by a standardized test of study skills, of males and females, enrolled in PSY101 at Phoenix College, compare?" Performance on the SSI for males and females was described by computing the means for the five subscales and the total score for each gender. Figure 3 is a graphic representation of the means obtained by males and females on the five subscales of the SSI compared to the means reported for the national norm.

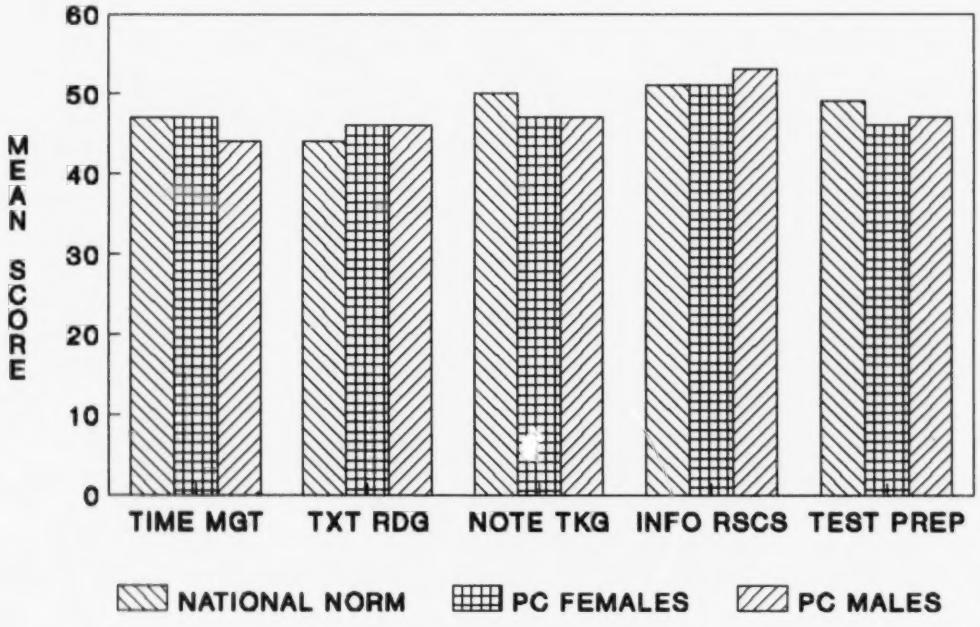

Figure 3

Comparison of Means Obtained by Phoenix College Males and Females on the Five Subscales of the SSI to Those Reported for the National Norm

An examination of Figure 3 indicates that both males and females scored above the national norm for Text Reading

and below the national norm for Note Taking and Test Preparation. On the Time Management scale, females scored at the national norm, while males scored below it. For the Information Resource scale, females scored at the national norm, but males scored above it.

Figure 4 is a graph of the means obtained by males and females on the total score of the SSI compared to the mean reported for the national norm.

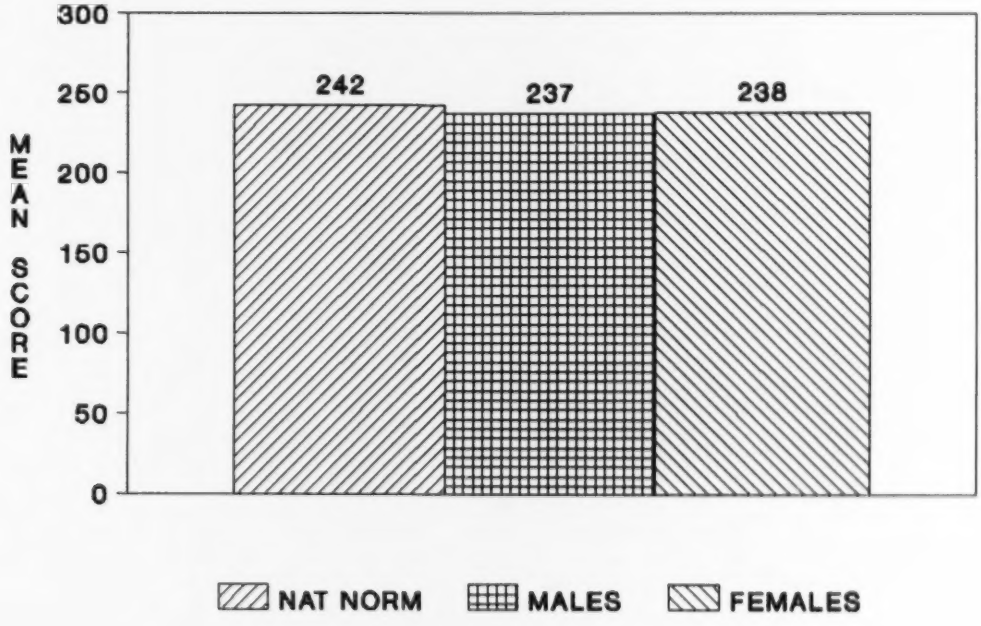

Figure 4

Comparison of Means Obtained by Phoenix College Males and Females on the Total Score of the SSI to the Mean Reported for the National Norm

As shown in Figure 4, the mean scores for both males and females were below that for the national norm. The males averaged one point below the females on this scale.

The third research question was: "How do study skill scores of students enrolled in PSY101 at Phoenix College, as measured by a standardized test of study skills, from selected ethnic groups compare?" To address this question, the mean scores for each of the five ethnic groups represented in this sample, for each of the five subscales of the SSI was computed. These scores, and the mean reported for the national norm are presented in Figure 5.

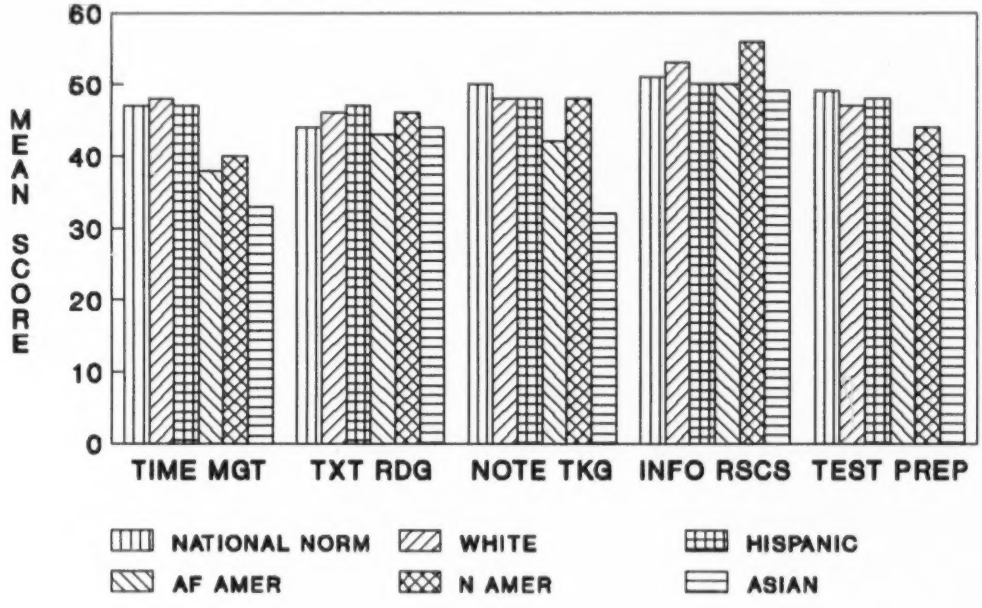

Figure 5

Comparison of the Means Obtained by Various Phoenix College Ethnic Groups on the Five Subscales of the SSI to Those Reported for the National Norm

As shown in Figure 5, the Asian group scored lower than the other ethnic groups for each of the five subscales of the SSI. Hispanics scored highest for the Text Reading and

Test Preparation subscales, while Whites scored highest on the Time Management subscale. Native Americans scored highest on the Information Resource subscale.

The total score on the SSI obtained by members of the selected ethnic groups at Phoenix College was compared to the total score reported for the national norm and is presented in Figure 6. Whites had the highest total score followed by Hispanics, Native Americans, and African Americans, with Asians having the lowest mean total score.

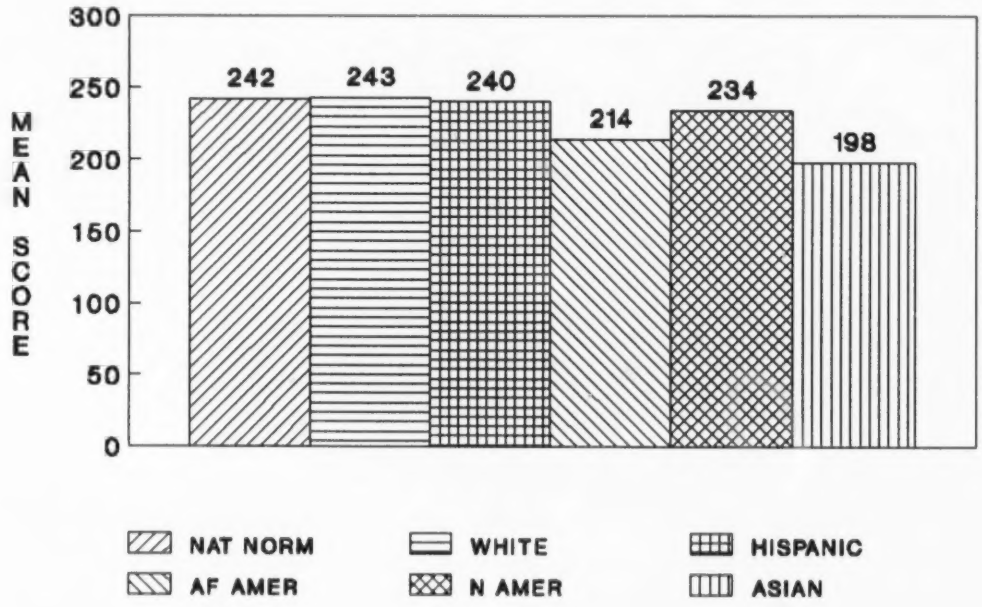

Figure 6

Comparison of the Means Obtained by Various Phoenix College Ethnic Groups on the Total Score of the SSI to the Mean Reported for the National Norm

The final research question addressed was: "How do study skill scores of students enrolled in PSY101 at Phoenix College, as measured by a standardized test of study skills, of selected age groups compare?" Students reported themselves as belonging to one of the first four age groups as listed on the demographic information sheet (Appendix A). No students in this sample, reported being over 47 years of age. The mean scores obtained on the five subscales of the SSI by members of the four reported age groups were computed. These scores are presented in Figure 7.

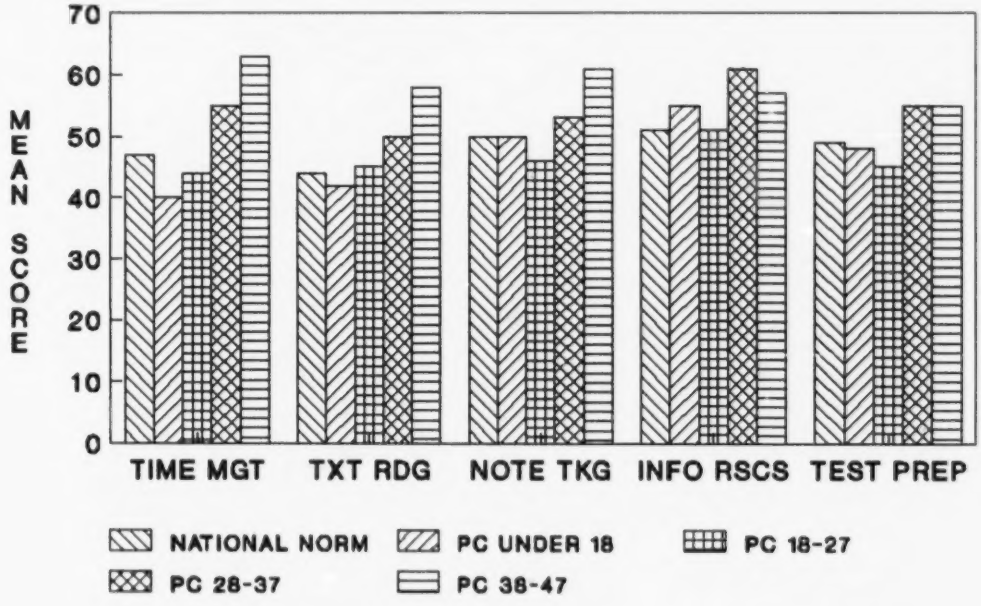

Figure 7

Comparison of the Mean Scores Obtained by Four Age Groups at Phoenix College on the Five Subscales of the SSI and Those Reported for the National Norm

In Figure 7 it can be seen that students in the 38-47 age group scored above the national norm and, with the

exception of the Information Resource subscale, higher than the other age groups on the subscales of the SSI. The under 18 age group scored lowest on the Time Management and Text Reading subscales, while the 18-27 age group scored lowest on the Note Taking, Information Resource, and Test Preparation subscales.

Figure 8 presents the mean total scores on the SSI obtained by each of the four age groups in comparison to the mean reported for the national norm. The pattern of older students scoring higher emerges for the 28-37 and the 38-47 age groups. The under 18 and 18-27 age groups scored lower than the national norm.

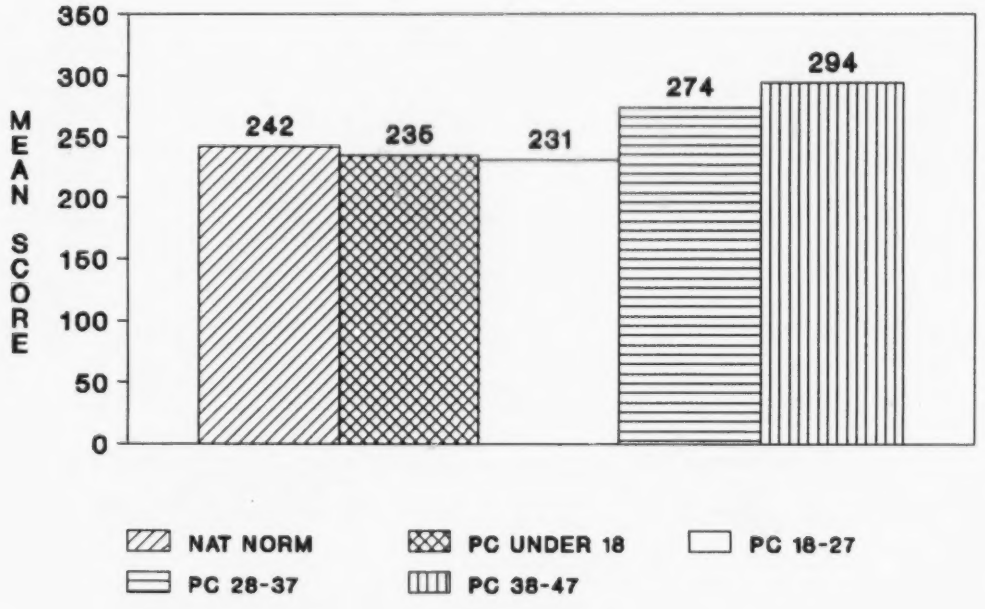

Figure 8

Comparison of Means Obtained by Four Age Groups at Phoenix College on the Total Score of the SSI to that Reported for the National Norm

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

An analysis of the demographic characteristics of the sample, as related to the demographic characteristics of students enrolled in courses in the Psychology Department, as well as at Phoenix College in general, indicates that the sample is representative of students in the Psychology Department as well as those at Phoenix College in general. As mentioned above, the demographic characteristics of students enrolled in Psychology courses was found to be similar to those of students at Phoenix College in general (Psychology Department Program Evaluation, 1988).

Gender reported by subjects in the sample was within one percentage point of the overall Phoenix College (PC) population for males (39 percent PC in general, 38 percent sample). For females the sample was within four percentage points (58 percent PC in general, 62 percent sample). It must be noted that three percent of the students at PC in general did not report gender, while no subjects in the sample failed to report gender.

When the ethnicity reported by students in the sample was analyzed, Hispanics (15 percent PC and 15 percent sample), Native Americans (3 percent PC and 5 percent

sample), and Asian/Pacific Islander (2 percent PC and 2 percent sample) appeared to be accurately represented by the sample. Whites (75 percent PC and 66 percent sample) and Afro-Americans (5 percent PC and 10 percent sample) seem to be over-represented in the sample.

While, as noted above, it was not possible to directly compare the age groups represented in the sample to those at PC in general, it must be pointed out that no student in the sample reported being over 47 years of age. At Phoenix College in general, approximately nine percent of the students reported their age as 46 years or older. When the ages of students in the younger age categories are compared, the overrepresentation of younger students is even more apparent. In the sample, approximately 82 percent reported being between 18-27 years of age, while at Phoenix College, only 48 percent of the students reported being under 26 years of age. One possible explanation for this discrepancy may be that the sample did not include students from the evening classes, while the data for PC in general did. There may be a larger percentage of older students attending classes in the evenings.

An analysis of the data presented in Tables 1 through 7, percentiles, means, and standard deviations obtained by the PC sample on the subscales and total score of the SSI indicated that the PC sample was reflective of the national norms provided for the SSI (ACT, n.d.). For the Time

Management subscale, the mean for the PC sample was 45.8 and the mean for the national sample was 47.3. When percentiles (Table 1) are examined, Phoenix College students tended to have a few extremely high scores that caused scores above 50 to fall in a lower percentile with respect to the PC data than with respect to the national norm. In addition, a few extremely low scores tended to cause scores below 50 to fall in a higher percentile with respect to the PC sample than when compared to national norm.

The standard deviation computed for this scale, 9.0 is consistent with the findings for the percentiles. The PC sample was found to be more variable than the national norm (SD= 7.0) on the Time Management subscale. These findings indicate that, in general, PC students are similar to the national norm on this subscale, with the exception of a few extremely high and low scores in the PC data.

On the Text Reading subscale, PC students rated themselves consistently higher than the national norm. Both the mean for PC (46.1) and the computed percentiles (Table 2) reflect a slightly higher score for the PC students than for the national norm on this scale. With respect to behaviors related to reading textbooks, PC students rated themselves slightly more capable than the national norm. In addition, the scores for this subscale were found to be more variable for the PC sample (SD= 7.4) than for the national norm (SD=6.9).

For the Note Taking subscale, PC students rated themselves consistently lower than the national norm. The comparison of the percentiles (Table 3) for the PC sample to those of the national norm reflected this lower rating. The mean for the PC sample was found to be 47.3 while the mean of the national norm was 50.1. Again the scores for PC sample were found to be more variable than those for the national norm (SD, 8.5 for PC vs. 7.4 nationally). Phoenix College students rated themselves as poorer in note taking skills than the population in general.

Phoenix College students rated themselves consistently higher on Information Resource Skills than the national norm. The percentiles (Table 4) computed for the PC sample were consistently higher than the national norm. The mean of the PC sample for this subscale was 52.3 compared to the national mean of 50.8.

For the Exam Preparation subscale, PC students rated themselves consistently lower than the national norm. An analysis of the percentiles (Table 5) for this subscale indicates that scores fell into consistently higher percentiles based on the PC sample than for those based on the national norm. The computed mean for the PC sample was 46.4, while that for the national norm was 49.2. Again, the scores for the PC sample were found to be more variable than those for the national sample (SD, 8.0 for PC vs. 7.0 for the national norm).

The total scores on the SSI for the PC sample was compared to those obtained for the national norm. An examination of the percentiles (Table 6) indicates that PC students did not score consistently higher or lower than the national norm. Scores above 266 and below 244 were slightly higher for the national norm, while scores between 266 and 244 were slightly higher for the PC sample. The mean for the PC sample was 237.8, while the mean for the national norm was 241.6. The PC scores were, again, more variable than those for the national norm (SD, 34.1 for PC vs. 29.6 nationally).

Overall, while the PC scores are not exactly the same as those for the national norm, they do seem to be closely aligned. The largest difference between means of subscales for the PC sample and those of the national norm was 2.8. For both the Note Taking subscale and the Exam Preparation subscale, the PC sample averaged 2.8 points below the national norm. The difference between the total score means for the PC sample and the national norm was 3.8. Phoenix College students did not score consistently higher or lower than the national norm on the whole inventory.

One interesting characteristic of the PC sample was its variability. In general, samples are found to be less variable than the population they are intended to represent (Rosenberg, 1990). In the case of the PC sample, the scores were consistently more variable than the national sample.

The higher variability of the sample might be attributed to a few extreme scores obtained by PC students. One student scored 320 and another scored 308 on the total scale, while the national norm did not report scores higher than 302. On the low end of the scale two students scored 164 and 167 respectively, while the national norm did not report scores below 175.

A comparison of the scores on the subscale and total of the SSI obtained by students in the selected demographic categories was presented in Figures 3 through 8. An examination of Figures 3 and 4 indicates that, with respect to gender, there were no consistent differences between the scores of males and females on the SSI. Both males and females scored higher than the national norm on the Text Reading subscale. On the Note Taking and Test Preparation subscales, both males and females scored below the national norm. These findings are similar to those for the PC sample in general. On the Test Preparation and Information Resource subscales, males scored slightly higher than females. For the total score, males' mean score was 237 and females' mean score was 238, both below the national norm. On the total scale, females averaged only one point higher than males. This result did not support Mueller and Gibson's (1983) finding that females scored higher than males on an inventory of study skills. On the total scale,

the mean scores of males and females accurately reflected those of the PC sample in general (237 and 238 vs. 237.8).

In a comparison of the scores of the selected ethnic groups on the subscales of the SSI, no clearcut pattern of ethnic differences emerged. The mean scores for Asians was consistently lower than those for the other ethnic groups. It must be remembered, however, that only one Asian student is included in the PC sample. On the Time Management subscale, Whites and Hispanics scored above the national norm, while Afro-Americans, Native Americans and Asians scored below the national norm. On the Text Reading subscale, only Afro-Americans scored below the national norm. All ethnic groups scored below the national norm on the Note Taking and Test Preparation subscales. On the Information Resources subscale, Whites and Native Americans scored above the national norm, with the mean for Native Americans higher than that for Whites. Hispanics, Afro-Americans and Asians scored below the national norm on this subscale.

With respect to the mean total score, Whites scored one point higher than the national norm (243 vs 242), while the Asians averaged 198, which was 44 points below the national norm. Hispanics scored 240, two points below the national norm. Native Americans averaged 234 and Afro-Americans averaged 214.

When the scores for the various age groups were compared, older students tended to score higher than younger students. One exception to this is apparent in the 18-27 year age groups. For the Note Taking, Information Resources and Test Preparation subscales and the total score, students in the 18-27 year age group had lower mean scores than students in the Under 18 age group. Students in the 28-37 and the 38-47 age groups consistently scored higher than the national norm on the subscales as well as the total score. These findings are consistent with those of Mueller and Gibson (1983).

Conclusions

From an analysis of these data, it can be concluded that the study skills reported by students in PSY101 are reflective of those reported by the national norm. It must be noted that this study employed a descriptive methodology and the differences among the groups have not been demonstrated to be significant. It must also be noted that, because of the preliminary nature of this study, further study is recommended before decisions can be made regarding changes in policy or practice with respect activities related to study skills at PC. While mean scores for the PC sample are not exactly the same as those for the national norm, they do not vary more than four points on any scale from those reported for the national norms. Based on these

preliminary findings, the SSI may be administered to students in the Psychology Department at PC and scores obtained can be compared to those reported for the national norm.

The gender or ethnicity of the students in the sample does not consistently relate to scores on the SSI. Only age seems to be consistently related to scores on the SSI, with older students scoring higher than younger students. Based on these findings it cannot be concluded that study skills of minority students differ from those of non-minority students. The gender of students does not appear to have an influence on the study skills scores.

Implications

The results of this study have implications for the administration of study skills inventories in the Psychology Department at PC. Based on the results, students at PC appear to score similarly to students included in the national norm. Scores of students in the Psychology Department can be compared to those of the national norm with confidence that they are accurately reflected by the national norm. This study has not demonstrated that study skills of PC students are poorer than those of the national norm, thereby accounting for lack of success in PSY101. However, it must be noted that, as mentioned above (ACT,

n.d.), students tend to over-rate themselves on scales of this nature.

The results of this study do not imply that students from minority groups have poorer study skills than those from non-minority groups. On the Text Reading and Test Preparation subscales, Hispanics scored higher than Whites. On the Information Resources subscale, Native Americans scored higher than Whites.

With respect to study skills courses offered by the PC Learning Center, it would appear that students need the most help with Note Taking and Test Preparation and the least help with Information Resource skills. The results of this preliminary study do not support specialization of study skill workshops for various gender, age or ethnic categories.

Recommendations

This study was a preliminary description of the study skills of students enrolled in PSY101 at Phoenix College. Since it has been demonstrated that students in the Psychology Department are representative of students at Phoenix College (Psychology Department Program Evaluation, 1988), these preliminary results may also be applied to Phoenix College students in general. Based on the findings of this study, it is recommended that the use of study skills workshops or training to improve student success be

approached cautiously. The results of this project should be discussed with the members of the Psychology department and the staff of the Phoenix College Learning Center. In this way, they can be made aware of the performance of PC students on a study skill inventory as well as providing input as to further actions in this area.

PC students do not appear to score lower than the national norm, thus lack of adequate study skills cannot be used as a major reason for lack of success at Phoenix College. Before any changes in policy or procedure regarding student study skills courses, it is recommended that further study be completed. This further study should include a larger sample of students from several departments in the college. It should also consist of tests of significance between the scores obtained by PC students and those reported for the national norm. In this way, it can be ascertained whether the nation norm is truly an accurate reflection of the study skills of PC students. Furthermore, based on the findings of Dutrow and Houston (1981), that scores on study skills inventories were not related to academic success, it is recommended that the relationship between final grades and scores on the SSI be established for Phoenix College students.

Finally, it is recommended that a thorough investigation of study skill inventories be undertaken before the SSI is accepted as the instrument of choice for

Phoenix College students. While the SSI is a standardized instrument that has been demonstrated to be reliable and valid (ACT n.d.), it is difficult and time-consuming to score. When used for individual students as a diagnostic tool, scoring can be accomplished relatively easily and quickly. When used for large groups of students, however, the scoring sheet which requires constant paging between the responses and a summary sheet, as well as re-writing of scores and responses, is time consuming and prone to errors of miscounting and miscalculation.

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APPENDIX A

FORM DESIGNED TO COLLECT DEMOGRAPHIC INFORMATION

Phoenix College
Psychology Department

Please check the appropriate categories and return this sheet with your completed Inventory.

Thank you for your cooperation.

1. Your gender:

____Male

____Female

2. Your age:

____Under 18

____18-27

____28-37

____38-47

____48-57

____58 or older

3. Your ethnic representation:

____White

____Hispanic

____African-American

____Native American

____Asian/Pacific Islander

____Other (please state)